Non-Native Invasive Plants

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What are Non-Native Invasive Plants?

Non-Native Invasive plants display rapid growth and spread quickly over large areas. They have been introduced into an environment in which they did not evolve and, thus are free of the vast and complex array of natural controls present in their native lands (including herbivores, parasites, pathogens etc.) that might limit their reproduction and spread. A working definition from the Weed Science Society of America is of a plant that can, has, or is likely to spread into native flora or managed plant systems, develop self-sustaining populations, and become dominant and/or disruptive to those systems.

Why are they here?

- Some non-native invasives were brought here unintentionally in soil, ballast, or crop seed.
- Most non-native invasives were specifically introduced into our country because they provided:
  - Quick growing and pest free erosion control
  - Visual screening
  - Windbreaks
  - Wildlife food
  - Ornamental Landscape Material

What are some of the characteristics of Non-Native Invasive Plants?

- Grow fast and mature early
- Reproduce profusely by seeds or vegetative structures
- Are difficult to move or control
- Spread quickly over large areas; thrive in many habitats
- Survive and produce seeds under adverse environmental conditions
- Have few known diseases or pests
- Have seeds displaying long lives in the soil. Some species exhibit seed dormancy ensuring periodic germination and protection from unfavorable conditions
- Have high photosynthetic rates
- May produce biological toxins that suppress the growth of other plants
- Often have prickles, spines, or thorns that can cause physical injury and repel animals; have adaptations for spread with crop seeds, by natural agents, and by humans.
- May have roots or rhizomes with large food reserves

Why are Non-Native Invasive Plants such a problem?

- Invasive plants rapidly invade new areas and out-compete native plants for light, water, and nutrients.
- They are aggressive, persistent, and pernicious and produce a significant change in terms of composition, structure, or ecosystem function in natural areas; they can eliminate entire native plant communities.
- Non-native invasives alter ecosystem processes such as natural succession; they prevent the seedling establishment of native plants. They can reduce the vigor of trees by shading, and ultimately kill trees and shrubs by girdling or cause trees heavily burdened by non-native invasive vines to topple.
- Non-native invasives encroach into parks, wildlife refuges, and urban spaces. In terms of biodiversity, non-native invasives threaten two-thirds of the endangered species world-wide and are considered by some experts to be the most important threat to biodiversity after outright habitat destruction.
- Non-native invasives disrupt insect-native plant associations (eg. seed dispersal, pollinator relationships) and can hybridize with native plants resulting in altered genetic composition.
- Non-native invasives replace the native food sources depended upon by wildlife, and reduce or eliminate host plants for native insects and other wildlife.
- In agricultural terms, non-native invasives compete with crops and reduce the quality of food, feed, and fiber worldwide.
- Even when grown in a cultivated garden, invasive plants can spread, escape, and cause landscape/weeding/maintenance problems for years to come. In suburban and city areas, there is a good chance that most of the worst weeds in your yard are escaped, non-native plants. In gardens, fields, backyards, and parks these are very expensive and time-consuming to control.

Some highly invasive non-native species in DC/MD/VA:

Garlic Mustard (*Alliaria petiolata*)
Porcelain Berry (*Ampelopsis brevipundunculata*)
Vietnamese Stilt Grass (*Microstigium viminium*)
Asiatic Bittersweet (*Celastrus orbiculatus*)
Devil's Tearthumb (*Polygonum perfoliatum*)
Japanese Honeysuckle (*Lonicera japonica*)
Lesser Celendine (*Ranunculus ficaria*)
Kudzu (*Pueraria lobata*)
Bush Honeysuckle (*Lonicera* spp.)
Multiflora Rose (*Rosa multiflora*)
English Ivy (*Hedera helix*)
Tree of Heaven (*Ailanthus altissima*)

Commonly used non-native invasive"landscape" plants:

Trees and Shrubs

Norway Maple (*Acer planatoides*)
Bush Honeysuckles (Lonicera mackii, L. tartarica, L.bella, etc.)
Bradford Pear (*Pyrus calleryana*)
Privet (Ligustrum vulgare)
Princess Tree (Paulownia tomentosa)
Russian & Autumn Olive (Eleagnus angustifolia, E.umbellata)
Japanese barberry (Berberis thunbergii)
Winged Euonymus (Euonymus alatus)

- **Ornamental Grasses**

Eulalia (Miscanthus sinensis)
Running Bamboos (Bambusa spp.)

- **Vines and Groundcovers**

Wisteria: Chinese & Japanese *(Wisteria sinensis & W. floribunda*)
Asiatic Bittersweet (*Celastrus orbiculatus*)
Porcelain Berry (*Ampelopsis brevipedunculata*)
Wintercreeper (*Euonymus fortunei*)
Crown Vetch (*Coronilla varia*)
Bugleweed (*Ajuga repetans*)
English Ivy (*Hedera helix*)
Periwinkle (*Vinca minor*)

- **Wetland Plants**

Purple Loosestrife (*Lythrum salicaria*)

Some Native Plants that might be substituted:

- **Recommended Native Trees:**

White Oak (*Quercus alba*)
Red Oak (*Quercus rubra*)
Southern Red Oak (*Quercus falcata*)
Mockernut Hickory (*Carya tomentosa*)
Blackgum/Tupelo (*Nyssa sylvatica*)
Eastern Red Cedar (Juniperus virginiana)
Red Maple (*Acer rubrum*)
American Beech (Fagus grandifolia)
Tulip Poplar (*Liriodendron tulipifera*)
River Birch (*Betula nigra*)
Sycamore (*Platanus occidentalis*)
Chestnut Oak (Quercus prinus)

- **Recommended Native Small Trees and Shrubs:**

Serviceberry (*Amelanchier canadensis*)
Strawberry Bush (*Euonymus americanus*)
Maple-leaf Viburnum (*Viburnum acerifolium*)
Arrowood Viburnum (*Viburnum dentatum*)
Black Haw Viburnum (*Viburnum prunifolium*)
Wild Hydrangea (*Hydrangea arborescens*)
Lowbush Blueberry (*Vaccinium vascillans*)
Pinxter flower (Rhododendron periclymenoides)
Highbush Blueberry (*Vaccinium corymbosum*)
American Hazlenut (*Corylus americana*)
Red Bud (*Cercis canadensis*)
Witch Hazel (*Hamamelis virginiana*)
Staghorn Sumac (*Rhus typhina*)
Shining Sumac (*Rhus copallina*)
Spicebush (*Lindera benzoin*)
American holly (Ilex opaca)
Red Chokeberry (*Aronia arbutifolia*)
Red Twig Dogwood (*Cornus serecia*)
Silky Dogwood (*Cornus amommum*)
Fringetree (*Chionanthus virginicus*)

- **Some Recommended Native Vines:**

Trumpet Honeysuckle (*Lonicera sempervirens*)
Trumpet Vine (*Campus radicans*)
Virginia Creeper (*Parthenocissus quinquefolia*)

- **Some Recommended Native Groundcovers:**

Green and Gold (*Chrysogonum virginianum*)
Allegheny Spurge (*Pachysandra procumbens*)
Wild Ginger (*Asarum canadense*)
Moss Phlox (*Phlox subulata*)
Wild Stone Crop (*Sedum ternatum*)
Golden Ragwort (Senecio aureus)

- **Some Recommended Native Wetland Plants:**

New York Ironweed (*Vernonia noveboracensis*)
Virginia Bluebells (*Mertensia virginica*)
New England Aster (Aster novae-angliae)
Arrowhead (*Sagittaria latifolia*)

Turtlehead (*Chelone glabra*)
Swamp Milkweed (Asclepias incarnata)
Pickerelweed (*Pontederia cordata*)
Cardinal Flower (*Lobelia cardinalis*)

- **Recommended Native Grasses and Ferns**

Sea Oats (*Chasmanthium latifolium*)
Big Bluestem (*Andropogon gerardi*)
Little Bluestem (*Schizachyrium scoparium*)
Christmas Fern (Polystichum acrostichoides)
Indian Grass (*Sorghastrum nutans*)
Switch grass (*Panicum virgatum*)
Bottlebrush grass (*Hystrix patula*)
Cinnamon fern (Osmunda cinnamomea)

Control Methods:

- **Mechanical –** Mow, cut back, dig, pull, dead-head, cut down, girdle, controlled burns
- **Chemical** – Paint foliage or freshly cut stem/stump with glyphosate, "hack & squirt"
- **Biological** – Insect Predators
- **Educational** – Don't plant it and tell others why they should not plant it as well

What is being done on a federal, state, and local level to control invasives? Here are some examples:

- Federal--Executive Order On Invasive Species (February 1999) – emphasis on exclusion, detection, eradication, management
- Regional -- Exotic Pest Plant Councils (eg. Mid Atlantic – EPPC)
- State -- State wide groups (eg. Maryland Invasive Species Council); State Wildflower Societies (eg. Maryland Native Plant Society); Nurserymen/Growers Associations (eg. Florida NGA)

Helpful Web Addresses:

- Http://www.nps.gov/plants/alien/
- Http://www.newfs.org/invasive/invasive.htm
- Http://www.geocities.com/rainforest/vines/2996/publications/invasives.htm
- Http://tncweeds.ucdavis.edu
- Http://www.invasivespecies.gov/

Nurseries that feature native plants:

Name	Address	Phone	Fax
Enchanter's Garden	HC77 Box 108 Hinton, WV 25951	304-466-3154	304-466-3154
Woodlanders	1128 Colleton Ave. Aiken, SC 29801	803-648-7522	803-648-7522
Niche Gardens	1111 Dawson Rd. Chapel Hill, NC 27516	919-967-0078	919-967-4026
Bobtown Nursery	16212 Country Club Rd. Melfa VA 23410	757-787-8484	757-787-8611
Babikow Greenhouses	7838 Babikow Rd. Baltimore, MD 21237	410-391-4200	410-574-7582
Blue Mount Nursery	Bluemount Rd. Monkton, MD 21111	410-329-6266	410-329-8120
Virginia Natives	PO Box D. Hume, VA 22639-0903	540-364-1665	540-364-1665
Heartwood Nursery	2121 Bluemount Rd. Monkton, MD 21111	410-343-0390	410-357-8799
Sylva Native Nursery	1683 Sieling Farm Rd. New Freedom, PA 17349	717-227-0486	717-227-0484
Octoraro Nursery	6126 Street Rd. Kirkwood, PA 17536	717-529-3160	717-529-4099
Clear Ridge Nursery	217 Clear Ridge Rd. Union Bridge, MD 21791	410-848-4789	410-848-5806